

## CLAIMS

1. A catheter system, comprising:
  - a first catheter element (1) with at least a first active localizer (4) placed on it, whose spatial position can be determined;
  - a second catheter element (2) with at least a second active localizer (5) placed  
5 on it, whose spatial position can be determined;wherein the first and the second catheter element are coupled in such a manner that a sliding movement relative to each other is possible.
2. A catheter system as claimed in claim 1, characterized in that the first catheter  
10 element (1) has a channel running in longitudinal direction, through which the second catheter element (2) is guided.
3. A catheter system as claimed in claim 1, characterized in that it comprises a  
fixing device (3), by means of which at least one of the catheter elements (1) can be fixed in a  
15 surrounding vessel (7).
4. A catheter system as claimed in claim 1, characterized in that at least one of  
the localizers (4, 5) is a magnetic field sensor in an external magnetic field for determining  
the position.  
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5. A catheter system as claimed in claim 1, characterized in that at least one of  
the localizers contains a source for electromagnetic and/or acoustic radiation.
6. A catheter system as claimed in claim 1, characterized in that the localizers (4,  
25 5) are arranged such that they are at a distance of less than 10 cm, preferably less than 5 cm  
from each other during the use of the catheter system.
7. A method for navigation of a catheter system in a vascular system (7), wherein  
the catheter system contains a first and a second catheter element (1, 2), which are coupled to

each other such that they can slide with respect to each other and carry at least a first or second active localizer (4, 5) respectively, the method comprising the following steps of:

- a) determining the spatial position of the first localizer (4) relative to the vascular system (7);
- 5 b) determining the spatial position of the second localizer (5) relative to the first localizer (4).

8. A method as claimed in claim 7, characterized in that the first catheter element (1) is fixed relative to the vascular system (7), while the second catheter element (2) is  
10 moved.

9. A method as claimed in claim 7, characterized in that an image is generated of the vascular system (7) with the catheter system contained in it and in that the spatial position of the first localizer (4) relative to the vascular system (7) is determined on this image.

15 10. A method as claimed in claim 7, characterized in that the catheter system is designed at least as claimed in one of the claims 1 to 6.